



Switzerland in Space

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Head of Earth Observation, Science and Exploration

DEFENCE AND SPACE

December 2023

AIRBUS

Airbus is a Global Leader in Aeronautics, Space and Related Services

Airbus, Airbus Defence and Space and Airbus Helicopters



MILITARY AIR SYSTEMS

180

locations worldwide



SPACE SYSTEMS

2,000+

customers and partners



CONNECTED INTELLIGENCE

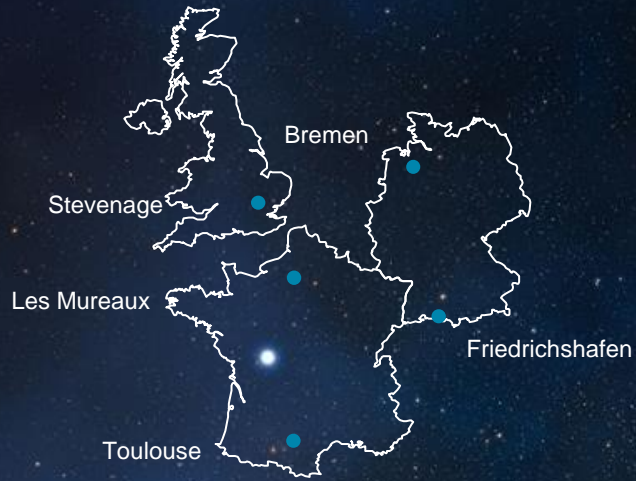
1,985+

aircraft delivered

150+

satellites built and launched

Airbus Space Exploration: From Europe to the Moon



EXPANSION



UTILIZATION



DISCOVERY

3 DESTINATIONS

3 PURPOSES

Airbus Space Exploration: In LEO, Moon and Mars



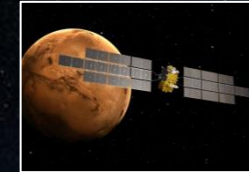
Starlab



ExoMars Rover



ISS Columbus since 2008



Earth Return Orbiter



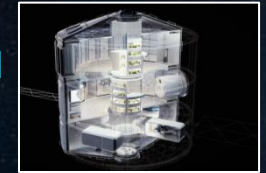
ATV 2008-2014



EURECA 1982/83



Orion ESM from 2022



Airbus LOOP



Spacelab 1981-1998



ISS Operations since 2004



Bartolomeo since 2020



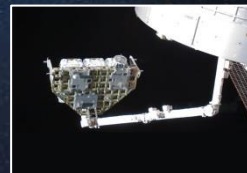
Lunar Logistics:



Payloads & Life Support Systems since 1980



Space Robotics since 1999



Integrated Cargo Carrier 1997-2010



AI since 2018



Transport & Landing



Sounding Rockets since 1977



1980

1990

2000

2010

2020

2030

December 2023

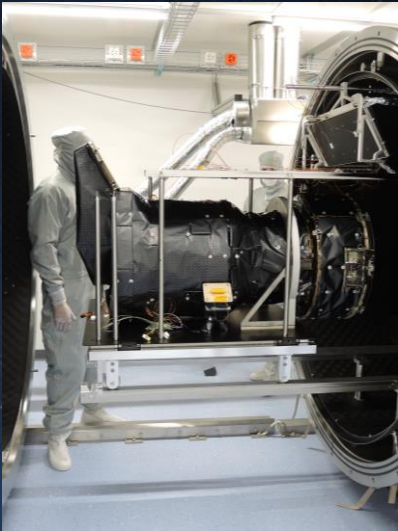
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LEO: Low-Earth Orbit

Pictures: Airbus, ESA, NASA



Switzerland's Contributions are Key



CHEOPS

Tailored Ritchey-Chrétien telescope from Univ. of Bern



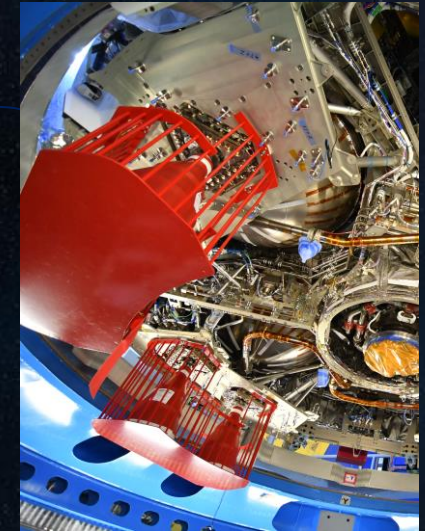
ROSALIND FRANKLIN MARS ROVER

50 drive systems from Maxon Motors throughout system



PROMETHEUS LIFE TECHNOLOGIES

UZH Space spinoff: 'Space Factory' for human tissue



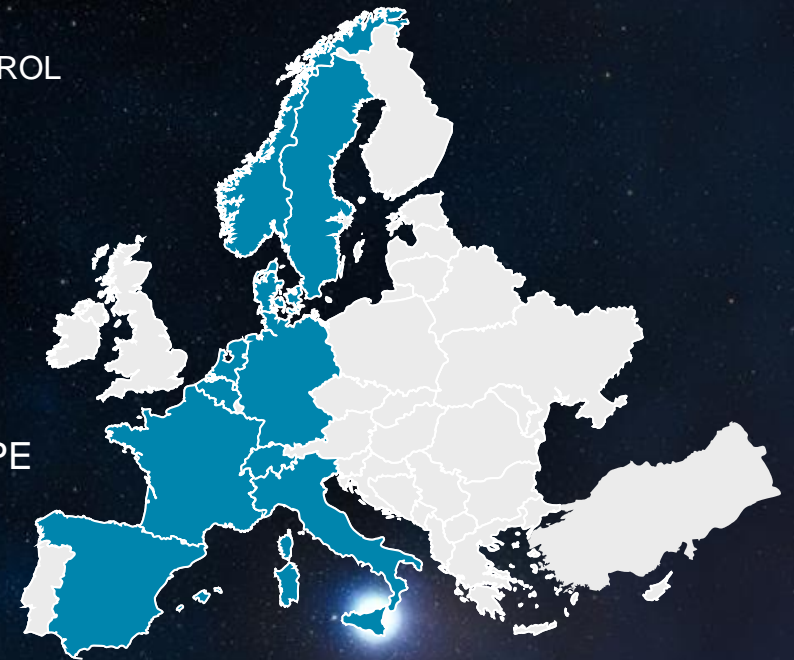
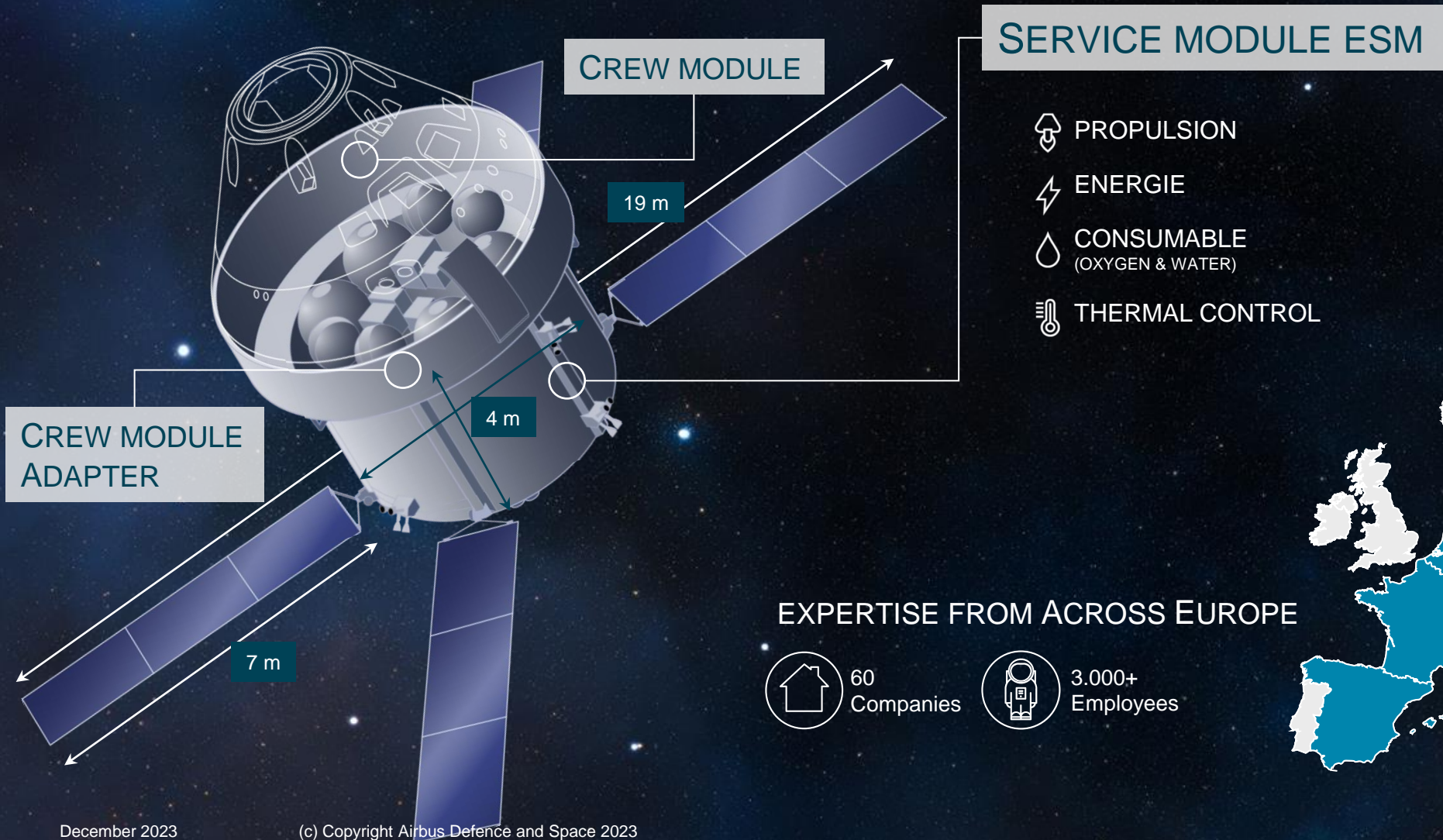
ARTEMIS

Orion ES Module Secondary Structure from Beyond Gravity



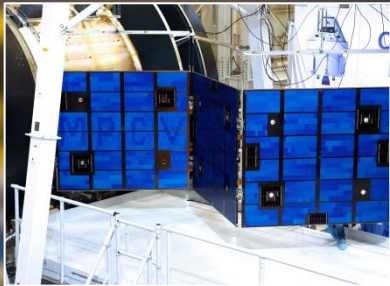
Artemis Launch Video

Made in Bremen: The European Service Module (ESM)



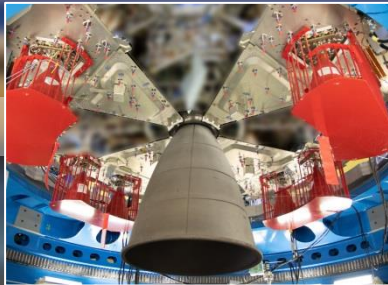
A Highly Complex System

240 l Water
90 kg Oxygen
8.000 l Propellant



70 m² Solar Cells

33 Thrusters

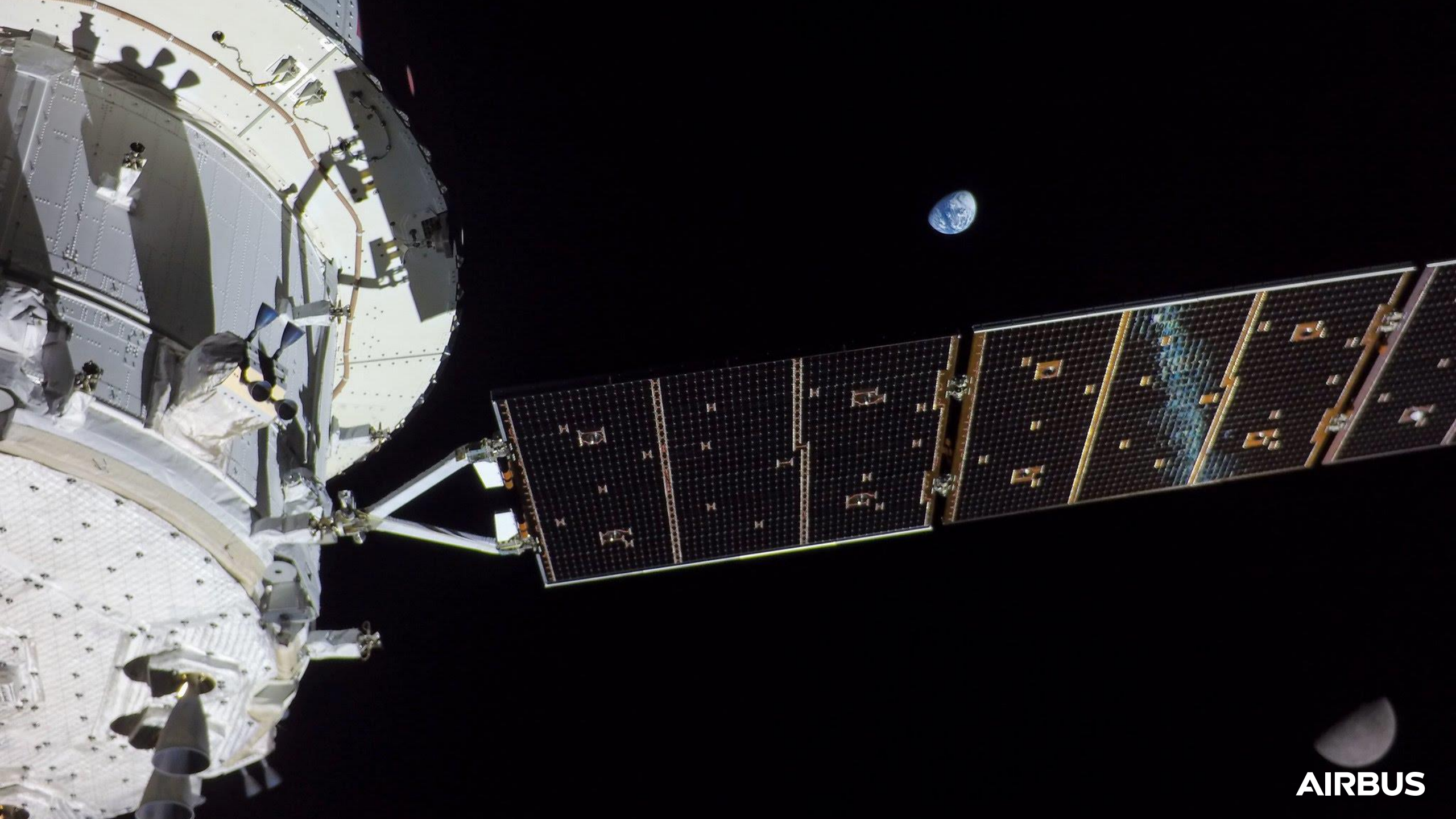


4 m \varnothing and height
13 t launch weight



20.000+ Parts

12 km Cable



AIRBUS

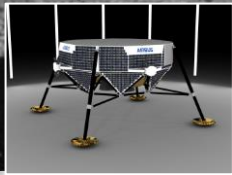
Europe Propels NASA's Artemis Missions to the Moon



For Tomorrow's Space Exploration and a More Sustainable Life on Earth



ORION ES 7-9



MOON LOGISTIC: TRANSFER & LANDING

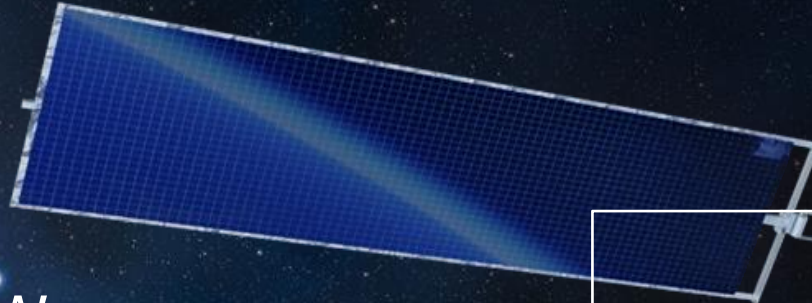


RESOURCE UTILISATION



SPACE ROBOTICS

Starlab: Our New Home in Space



60kW POWER AND
PROPULSION ELEMENT



LARGE WINDOWS CREATE
LIVABLE, ENJOYABLE ENVIRONMENT



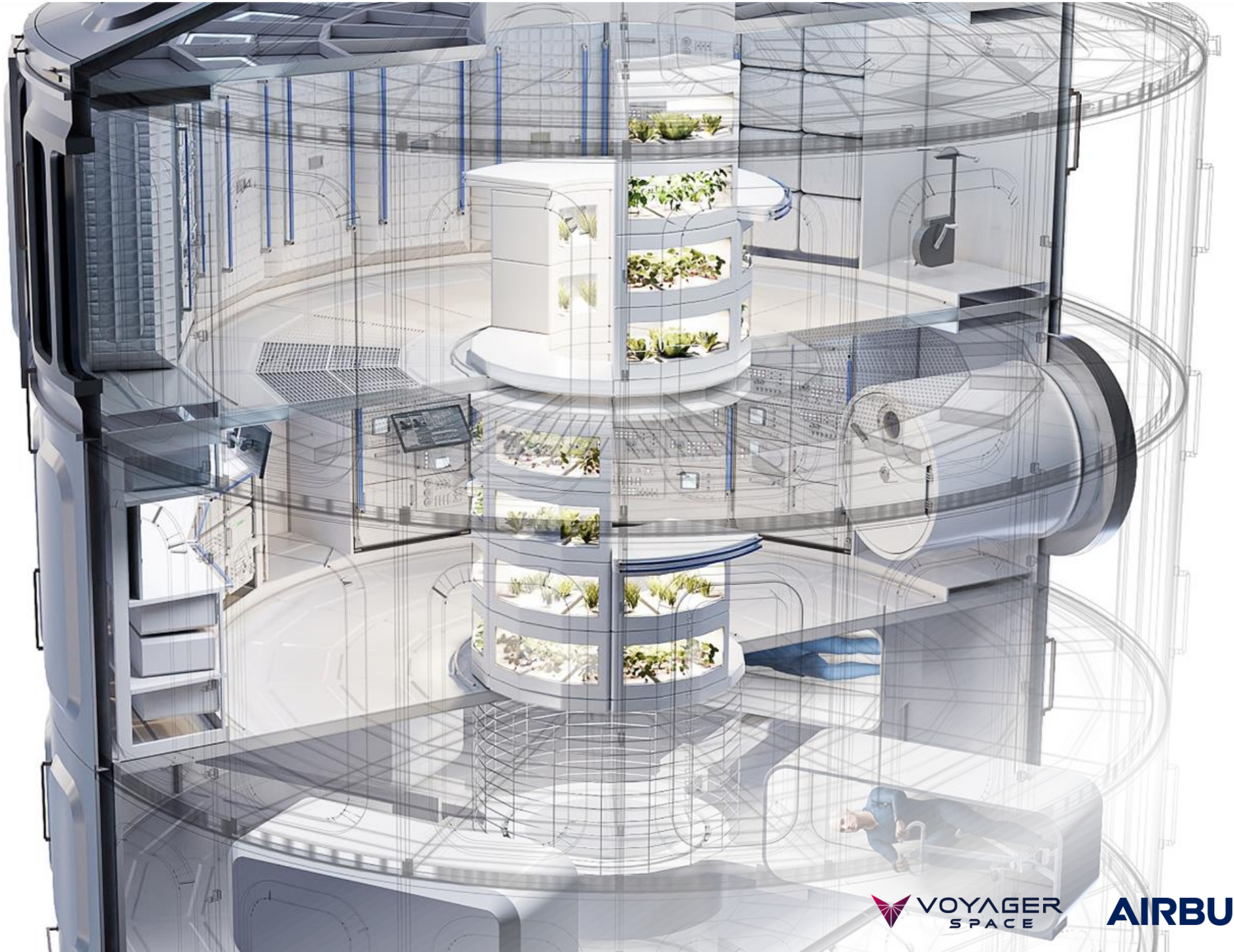
METALLIC HABITAT HOSTS
CREW QUARTERS AND LABORATORY

3 PORTS FOR EXPANSION
AND MULTIPLE VISITING VEHICLES



ROBOTIC ARM SUPPORTS
CARGO AND EXTERNAL PAYLOADS

ONE MODULE
THREE DECKS
ENDLESS
POSSIBILITIES



DEFENCE AND SPACE

8 METERS / 26 FEET

4 (+4) CREW

AMPLE SPACE IN SPACE

400+ EXPERIMENTS / YEAR

100% ISS CAPACITY

UNLIMITED SCIENCE

LOW RISK, FAST TO ORBIT LAUNCHES? WE JUST NEED ONE

2023 STARLAB JOINT
VENTURE FORMED

2025 CRITICAL
DESIGN REVIEW

2028 LAUNCH

2029 START
OF OPERATIONS





Starlab Video

Thank You for Your Attention

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